BioSketch

Computational Toxicology Framework Consultation Panel

Melvin Andersen

Dr. Melvin Andersen is the Director, Division of Biomathematics and Physical Sciences, CIIT-Centers for Health Research, Research Triangle Park, NC. His responsibilities include imparting a systems biology emphasis to research on the health effects of environmental chemicals. Dr. Andersen was Professor of Environmental Health from 1999 to 2002. From1994-1998, Dr. Andersen was Vice-President of the K.S. Crump Group of ICF Kaiser International Consulting. Between 1971 and 1994, he held positions in toxicology research and research management in the federal government (DoD and US EPA) and in private industry (Chemical Industry Institute of Toxicology). His career contributions are in developing biologically realistic models of the uptake, distribution, metabolism, and biological effects of drugs and toxic chemicals and applying these models in safety assessments and quantitative health risk assessments. He is recognized for contributions in developing short-courses and computer demonstrations in pharmacokinetics and pharmacodynamic modeling. Dr. Andersen is an author or co-author of 225 papers and 33 book chapters. He has received several awards for professional contributions. These awards include the Herbert Stokinger Award(American Conference of Industrial Hygienists, 1988), the George Scott Award (Toxicology Forum,1993), the Kenneth Morgareidge Award(International Life Sciences Institute, 1989), and both the Frank R. Blood (1982) and Achievement Awards (1984) from the Society of Toxicology. Dr. Andersen is board certified in Industrial Hygiene and in Toxicology. His current research interests are developing mathematical descriptions of control of genetic circuitry in the developing and adult organism and the dose response and risk assessment implications of these control processes. In June 2002, Dr. Andersen was recognized as a 'highly cited' scientist by the Institute for Scientific Information. In the past 5 years, Dr. Andersen has had research funding while at Colorado State University from the US EPA STAR Grant program (Atrazine Biomonitoring Tools), the American Chemistry Council (Both Defeminization of Rats by Estrogenic Endocrine Active Compounds and Hepatic Enzyme Induction by PCBs), Dow Corning (Siloxane Pharmacokinetics in Rats and Humans) and Syngenta (Pharmacokinetics and Pharmacodynamics of Atrazine in Rats).

John Balbus

Dr. John M. Balbus, M.D., M.P.H. is a senior scientist and director of the environmental health program for Environmental Defense. Dr. Balbus' background combines training and experience in clinical medicine with expertise in epidemiology, toxicology and risk sciences. He has authored studies and lectures on global climate change and health, waterborne hazards, the toxic effects of chemicals, and regulatory approaches to protecting susceptible subpopulations. Dr. Balbus received his A.B. degree in Biochemistry from Harvard University, his M.D. from the University of Pennsylvania, and his M.P.H. from the Johns Hopkins University. He completed his internal medicine residency at Pennsylvania Hospital and his residency in occupational and environmental medicine at the Johns Hopkins School of Hygiene and Public Health. Prior to joining Environmental Defense, Dr. Balbus spent seven years at The George Washington University, where he was founding Director of the Center for Risk Science and Public Health and served as Acting Chairman of the Department of Environmental and Occupational Health. Appointed in both the School of Public Health and Health Services and the School of Medicine and Health Sciences, Dr. Balbus taught toxicology, environmental health and occupational medicine to both graduate public health students and medical students. He was principle investigator on a five year cooperative agreement with the US EPA's Office of Water, concerning microbial risk assessment and susceptible subpopulations. Dr. Balbus is a Fellow of the American College of Physicians, and member of the American Public Health Association, American College of Occupational and Environmental Medicine, and the Society for Risk Analysis.

Richard Becker

Dr. Richard A. Becker, Ph.D., DABT Current position: Senior Director, Public Health, American Chemistry Council Educational background: A Ph.D. in Pharmacology & Toxicology, University of California Irvine 1981A BA Chemistry, Swarthmore College, 1977Area of expertise and research activities A Toxicology and Risk AssessmentA Development and validation of endocrine screens/tests Service on other advisory committees, professional societies, especially those associated with issues under discussion in this review A Member USEPA CCL Subcommittee (FACA)A Member Society of ToxicologyA BIAC Representative & Participant OECD Endocrine Disrupters Testing and Assessment (EDTA) Task Force Sources of recent grant and/or contract support: Support for research & lab projects he has directed has been provided by the American Chemistry Council

Patricia Billig

Ms. Patricia Billig, BA & MPH (UC Berkeley), MA (San Francisco State University), REHS and Vice President of Waterstone Environmental Hydrology and Engineering, has over 23 years experience conducting and managing more than 100 environmental investigation and modeling projects and subsequent ecological and human health risk assessments for corrective actions both nationally and internationally. She also has led and participated in national and international high-level meetings and negotiations with representatives from industry, national and local governments, and non-government organizations to identify and bring together disparate groups of stakeholders and facilitate collaborative processes to reach agreements on solutions to public health and environmental concerns. She has developed workshops and training sessions for environmental and industrial professionals in Eastern Europe, the Middle East, Africa, Latin America and the U.S., primarily related to environmental and risk assessment issues. As a result of her work, she co-authored a USAID Publication entitled: A Community-Based Approach to Environmental Health: Guidance for Implementation & Plans for Skill-Building Workshops. From 1998-99, she served as the Risk Assessment Expert on a five person panel convened by the Water Environment Research Foundation to provide consultation and oversight to King County (Seattle), WA for an extensive water quality modeling evaluation and ecological/human health risk assessment of the county's combined sewer overflow

(CSO) control program. In August 2002, Ms. Billig was certified in the Sandia Risk Assessment Methodology for Water Surety (RAM-WSM). Recent contracts include risk assessment and toxicology services for the Wyoming Department of Environmental Quality and the US Army Corps of Engineers.

Stuart Cagen

Dr. Stuart Cagen Current Position: Toxicology Advisor, Shell Chemicals, Ltd., Houston, Texas Educational Background: University of Wisconsin, Madison, Wisconsin (B.S. 1973) Michigan State University, East Lansing, Michigan (Ph.D., Pharmacology, 1977) Area of Expertise: Toxicology, with emphasis on endocrine, reproductive and developmental toxicology, mechanisms of toxicity, including pharmacokinetics, risk assessment. Research Activities: Toxicology studies (endocrine, reproduction, developmental toxicity, neurotoxicity), biochemical mechanisms, metabolism studies, risk assessment. Service on other advisory committees, professional societies, especially those associated with issues under discussion in this review: American Industrial Health Council, Neurotoxicology and Reproduction and Developmental Toxicology Subcommittees Member, Board of Directors, CIIT (1999-2001)Member, CIIT Science Program Committee (1999-present)Candidate member: ACGIH Chemical Substances Threshold Limit Value Committee (current) American Chemistry Council Endocrine Research Technical Implementation Panel (ETIP), Chair (current)American Chemistry Council Science Policy Team (current)Endocrine Issues Science Forum, Chair (1994-2000) PROFESSIONAL SOCIETIES: Member, Society of Toxicology (SOT) (Current) Member/Founder, Gulf Coast Chapter SOT Member, Society for Risk Analysis (SRA) Member/Founder, Lone Star Chapter SRA Sources of recent grant and/or contract support: None

Harvey Clewell

Mr. Harvey Clewell is currently a Principal with the ENVIRON Health Sciences Institute. He received an M.A. in physical chemistry from Washington University, St. Louis, in 1969, and is a Diplomate of the American Board of Toxicology. He has more than 30 years experience in computer modeling of the environmental fate and transport and biokinetics of toxic chemicals. He is a leading expert in the development, evaluation, and application of PBPK models in chemical risk assessment. He is a member of the FIFRA SAP. His recent research has primarily been funded by the American Chemistry Council, EPRI, and the EPA.

Darrell Donahue

Dr. Darrell Donahue received a B.S. in Zoology/Chemistry and minor in Mathematics from North Carolina State University (NCSU) in 1981 and a M.S. in Biological Engineering with a minor in Mathematics from NCSU in 1986. Dr. Donahue obtained a Ph.D. degree in Engineering and Operations Research from NCSU in 1992.Dr. Donahue was appointed program coordinator of the biological engineering program at the University of Maine (U Maine) in July 2001, which has a focus on engineering, applied to the biotechnology and other bio-type industries and is part of the Department of Chemical and Biological Engineering at U Maine. He was appointed Associate Professor of Engineering (with tenure) at U Maine in September 2000. He joined the faculty at U Maine in February 1995 and currently has a 50/50 research/teaching appointment. Dr. Donahue teaches a junior level statistical process control (SPC) course each semester that is taken by all U Maine engineering students, an introductory biomedical engineering course, an introductory engineering course to biological and chemical engineers, and a graduate level computer simulation and modeling course. The modeling course introduces graduate students to the modeling of complex biological systems as they can be modeled as a combination of discrete/continuous systems. He is a certified HACCP trainer and has trained and assisted small food processors in the development and implementation of HACCP plans. Dr. Donahue currently receives funding from the Maine Technology Institute, USDA-CSREES, NSF and the Maine Space Grant Consortium.

George W. Lucier

Dr George W. Lucier is an environmental consultant with emphasis on toxicology, exposure assessment and risk assessment models which integrate diverse data sets. Dr Lucier retired from the NIEHS in 2000, where he served as Director of the Environmental Toxicology Program, Associate Director of the National Toxicology Program, Head of the research group on molecular toxicology and epidemiology and co-editor of Environmental Health Perspectives. He continues to serve as Chair of the Scientific Advisory Board for the regulation of hazardous air pollutants for North Carolina. This board conducts risk assessments and recommends safe exposure levels of air pollutants. Dr Lucier is a scientific advisor to the NIEHS, NTP, WHO and is the public health expert on the North Carolina based s Steering Committee for the development of environmentally-superior technologies for handling hog wastes. Dr Lucier is a Senior Adjunct Toxicologist with Environmental Defense.

Dr Lucier received his Ph.D from the University of Maryland School of Agriculture in 1965. During his career he has published over 200 articles in the peer-reviewed scientific literature, chaired dozens of scientific conferences and workshops including IARC working groups, workshops on biologically-based models for human risk assessments and exposure assessment, and conferences on herbal medicines and endocrine disrupters. He played a key role on numerous advisory boards and interagency activities including chairing a White House Committee charged with reaching agreement among various agencies on risk assessments for methylmercury. His research on mechanisms of action for dioxin, hormonally-active chemicals and risk assessment models is widely recognized and it has led to several awards . Dr Lucier led much of the effort to incorporate mechanistic studies into toxicological evaluations of the NTP including the development and validation of alternative models. He also developed processes for NTP review that were scientifically-rigorous, open and responsive to the concerns of various stakeholders.

Alex Merrick

Dr. Alex Merrick is currently head of the Proteomics Group in the National Center for Toxicogenomics at NIEHS/NIH in Research Triangle Park, NC. Educational Background: Ph.D. University of Nebraska, Omaha, NE; Post-doc at Oak Ridge National Laboratory, TN Expertise and Research: Dr. Merrick has expertise in toxicology, proteomics, genomics and biochemistry. His program research involves development of protein biomarkers in target organs and serum and his basic research interests involve the p53 pathway, cell growth and apoptosis and protein phosphorylation. Service on other committees: Serves on Human Proteome Organization subcommittee for Tissue and Cell Proteome. Serves on ILSI-HESI Biomarkers committee. Active in SOT in continuing education courses on proteomics. Grant/Contract support: Federal government intramural budget.

Charles Pittinger

Dr. Charles Pittinger is an environmental toxicologist and policy analyst with the Cadmus Group. Fall 2002 he established Cadmus' Cincinnati offices, focusing on product stewardship and the integration of hazard and risk tools for effective risk management. Previously, Dr. Pittinger worked as Director of Research for SoBran, Inc., where his duties included supervising research contracts at three EPA research facilities. For 17 years, Dr. Pittinger worked for The Procter & Gamble Company, principally in environmental risk assessment and management. He has published over 40 scientific articles, book chapters and editorials on subjects including: regulatory and science policy; peer review; ecological risk assessment and management of consumer product chemicals; risk communications; life cycle analysis; sustainability; ecological assessment; environmental mutagenesis; environmental chemistry; aquatic toxicology; and sediment contamination. Dr. Pittinger has served in numerous leadership roles in both the public and private sectors. He was elected to the Society for Environmental Toxicology and Chemistry Board of Directors, served as SETAC's first Congressional Science Fellow with the U.S. House of Representatives Science Committee in 1993-94, and was awarded SETAC's Exceptional Service Award in November 2000. He initiated SETAC's Peer Review Subcommittee and Technical Issue Paper on "Sound Science". He chaired the American Industrial Health Council's Ecological Risk Assessment Committee for 5 years. He has served on the OECD's Risk Assessment Advisory Board, the American Chemistry Council's Ecological Risk and Life-Cycle Analysis Committees; and ASTM Subcommittee E-47. He received his Ph.D. in Zoology from Virginia Polytechnic. Dr. Pittinger was reappointed to a second term on EPEC ending 9/04.

Clifford P. Weisel

Dr. Clifford Weisel is Associate Professor, Environmental Occupational Health Division at the UMDNJ-School of Public Health. He received his undergraduate training in chemistry at SUNY at Stony Brook in 1974; an M.S. in Analytical Chemistry from University of RI in 1978; a Ph.D. in Chemical Oceanography from University of RI in 1981; and postdoctoral training at the NOAA/AOMI in Florida. His expertise is in pharmacokinetics and metabolism of toxicants and exposure to toxicants such as mercury, lead solvents, chorine, ozone, haloacetic acids, etc. Research activities include contribution of outdoor PM sources to indoor concentrations, benzene metabolism and environmental mixtures, telemedicine tools for collecting patient data, asthmatic admissions as indicator or ozone exposure, inhalation and dermal exposure of MTBE (breath analysis) and residential exposure to volatile organic compounds. Dr. Weisel has served on various committees and workshops including NY State Department of Health Accredited Laboratory, SI/NJ Urban Air Toxic Workgroup Advisory Board, Exposure Assessment Research Workshop on Gasoline, Exposure Assessment Research Workshop on Gasoline, , Workshop on Emissions, Modeling and Exposure, NAS Committee to Review Health Effects in Vietnam Veterans of Exposure to Herbicides, Working Group on DBPs and Reproductive Effects, Expert Panel on Benzene Exposure Working Group on the Estimation of Dermal and Inhalation Exposures to Contaminants in Drinking Water, Expert Panel on Benzene Exposure for the Harvard School of Public Health, Chair of Exposure Section of Workgroup on Research Needed to Reduce Uncertainty in Health Risk Assessment for Ozone, American Water Works Association Project Advisory Committee, Workshop on Novel Methods for Risk Assessment of Disinfection By-Product Mixtures in Drinking Water, Steering Committee of Exposure Assessment for Disinfection By-Products in Epidemiologic Studies, Health Canada, Site Visit Member NIEHS Review of PO1 Proposal for a Center at UNC-CH for Environmental Health and Susceptibility, Pediatric Asthma Coalition of New Jersey, Environmental Task Forces, Workshop for the American Chemistry Council Longterm Research Initiatives in Exposure, NIEHS Reviewer of Community-Based Participatory Research Grants, CDC Workshop to Refine Research Agenda for Tap Water Disinfection Byproducts and Human Health. Professional society membership includes American Association for the Advancement of Science, American Chemical Society, American Geophysical Union, American Water Works Association, Association of Teachers of Preventive Medicine and the International Society of Exposure Analysis. Sources of recent grant and/or contract support include HEI, NIEHS, RWJ Foundation Exploratory Grant, NJ DEP, USEPA Subcontract from Battelle Memorial Institute, and Mickey Leland National Urban Air Toxics Research Center.

Angela Wilson

Dr. Angela Wilson is an Assistant Professor of Chemistry at the University of North Texas. She obtained her Ph.D. with Professor Jan Almlof from the University of Minnesota, and completed her postdoctoral work with Dr. Thom H. Dunning, Jr. in the Environmental Molecular Sciences Laboratory of Pacific Northwest National Laboratory. Her computational research has focused in several areas including environmental chemistry the development of computational methods to enable

reduced computational scaling, the development of several families of correlation consistent basis sets, and benchmarking of methodology. Previous related research includes computational studies of electron transfer within reaction centers of bacteria and one year of bench research in bacterial classification. She is currently funded by several NSF grants, including a recent NSF CAREER Award.Dr. Wilson has been selected as a 2003 IUPAC Young Observer, where she will participate in the Division of Chemistry and the Environment meeting. She has organized two major symposiums in computational chemistry at the previous two Spring National Meetings of the American Chemical Society, and is presently editing an ACS volume on computational chemistry, which is scheduled for publication later this summer. She is an Alternate Councilor in the American Chemical Society.

Andrew Worth

Dr. Andrew Worth is Scientific Officer of the European Commission, working at the Commission's Joint Research Centre in Italy Educational background: Bachelor's degree in physiological sciences (emphasis on biochemistry, chemistry and pharmacology), master's degree in linguistics, and PhD in computational toxicology Areas of expertise: Development and validation of QSARs, validation of in vitro toxicity tests, design of integrated assessment strategies combining QSARs and in vitro tests Current research: Supervision of research on development of QSARs for acute toxicity, blood-brain barrier penetration and metabolism Current service on advisory committees:1) OECD Ad Hoc Expert Group on QSARs2) OECD Validation Management Group for Non-Animal Methods for Endocrine Disruptors (includes in vitro tests and QSARs)Formerly, Secretary of the ECVAM Scientific Advisory Committee, which advises the Commission on the scientific validity of non-animal methods Sources of recent grant support: European Commission training grant from February 1998 to February 2001.